DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	NATHAN POND	Lake Area (ha):	16.19
Town:	DIXVILLE	Maximum depth (m):	6.4
County:	Coos	Mean depth (m):	2.4
River Basin:	Androscoggin	Volume (m^3):	389500
Latitude:	44°55'13" N	Relative depth:	1.4
Longitude:	71°16'58" W	Shore configuration:	1.00
Elevation (ft):	2018	Areal water load (m/yr):	46.80
Shore length (m):	1300	Flushing rate (yr^{-1}):	19.50
Watershed area (ha):	854.7	P retention coeff.:	0.37
% watershed ponded:	0.0	Lake type:	natural w/dam

BIOLOGICAL:		23 February 1993	4 August 1992
DOM. PHYTOPLANKTON (% TOTAL)	#1	MELOSIRA 95%	MELOSIRA 65%
	#2		DINOBRYON 20%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			360
CHLOROPHYLL-A (µg/L)			2.54
DOM. ZOOPLANKTON (% TOTAL)	#1	FILINIA 55%	DAPHNIA 27%
	#2	KERATELLA 25%	CALANOID COPEPODS 23%
	#3		POLYARTHRA 18%
ROTIFERS/LITER		91	35
MICROCRUSTACEA/LITER		14	61
ZOOPLANKTON ABUNDANCE (#/L)		105	96
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.2
BOTTOM DISSOLVED OXYGEN (mg/L)		1.3	0.0
BACTERIA (E. coli, #/100 ml)	#1		200
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.5
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 28000

CHEMICAL:

Lake: NATHAN POND
Town: DIXVILLE

	23 February 1993		4 August 1992		
DEPTH (m)	2.0	4.0	2.0		4.0
pH (units)	6.2	6.1	7.0		6.9
A.N.C. (Alkalinity)	14.1	15.5	14.2		14.3
NITRATE NITROGEN	0.27	0.26	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.14	0.20	0.28		0.34
TOTAL PHOSPHORUS	0.011	0.012	0.017		0.014
CONDUCTIVITY (µmhos/cm)	43.9	46.0	38.4		39.9
APPARENT COLOR (cpu)	34	41	33		42
MAGNESIUM			0.75		
CALCIUM			5.0		
SODIUM			0.9		
POTASSIUM			0.49		
CHLORIDE	< 3	< 3	< 3		< 3
SULFATE	4	4	4		4
TN : TP	37	38	16		24
CALCITE SATURATION INDEX			2.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	0	3	Oligo.

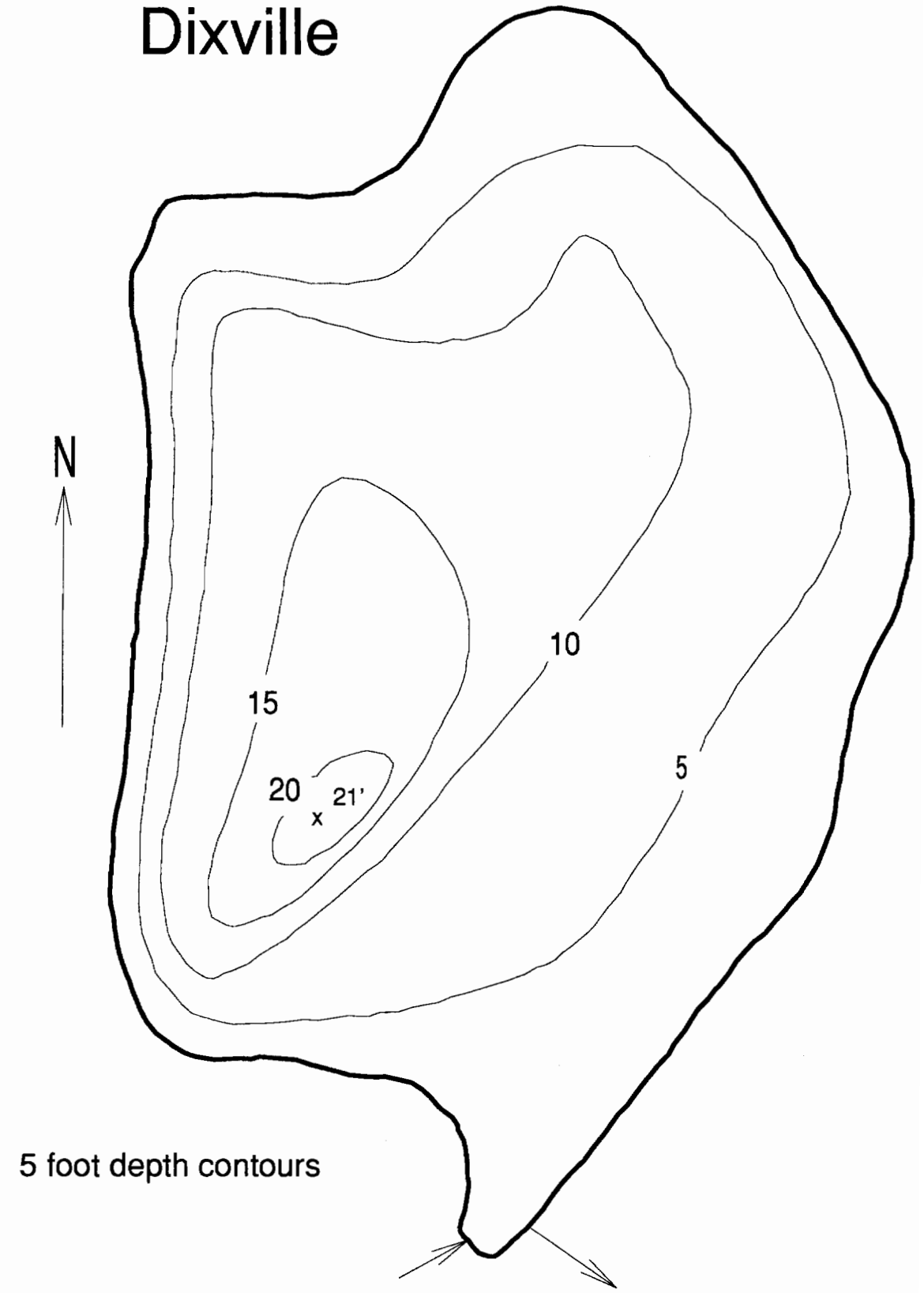
COMMENTS:

1. This is a remote pond, located up a walk-in trail north of Dixville Notch. It was surveyed jointly with the Fish and Game Department.

2. There were no camps on the pond, but there was a camp in the woods approximately ¼ mile from the pond.

3. Aphanocapsa (30%) and Cryptomonas (15%) were the dominant genera of wholewater phytoplankton. Blue-greens (40%), Cryptomonads (25%) and greens (25%) were the dominant classes.

Nathan Pond
Dixville



5 foot depth contours

FIELD DATA SHEET

LAKE: NATHAN POND
DATE: 08/04/92

TOWN: DIXVILLE
WEATHER: OVERCAST, COOL

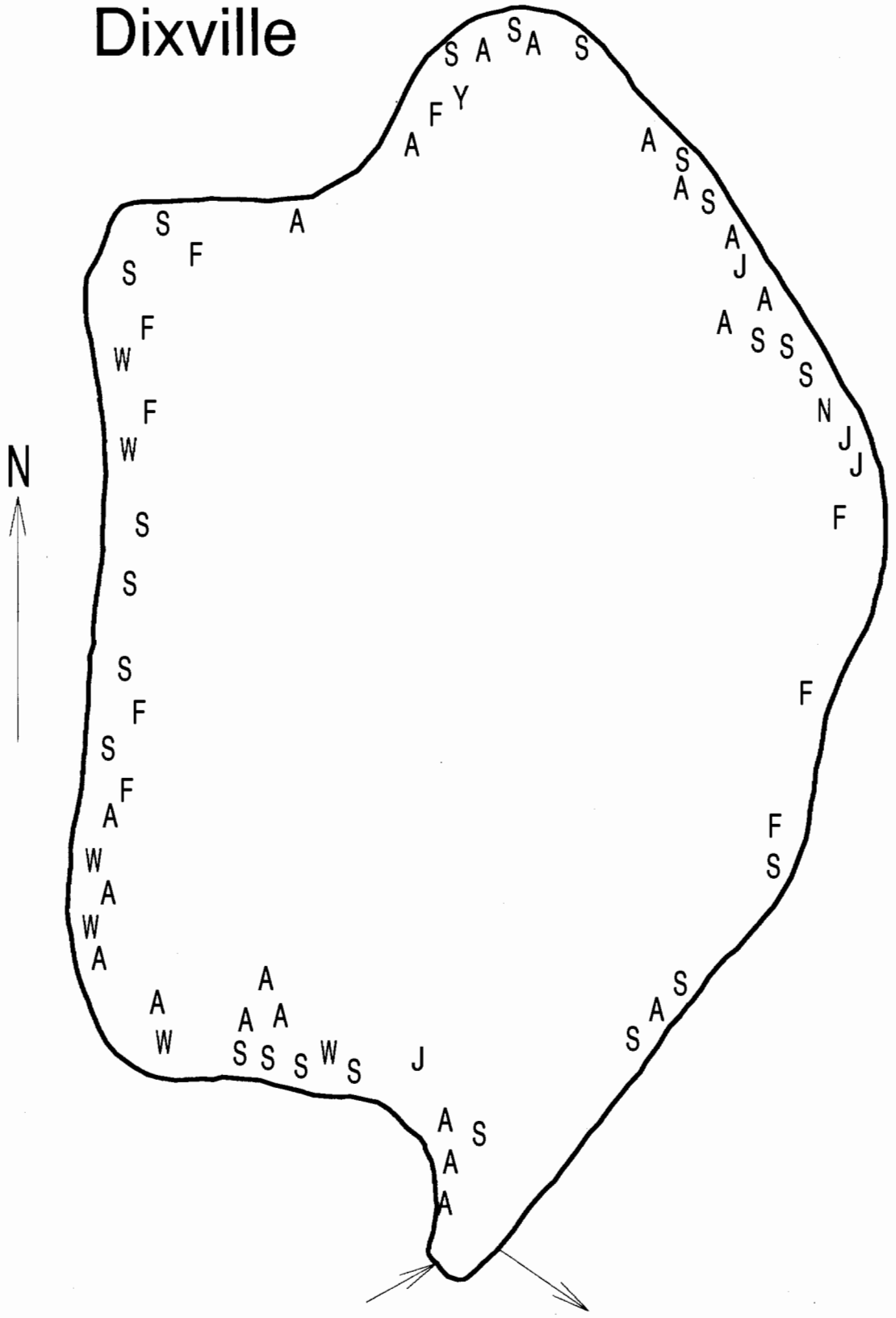
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	17.4	8.5	88 %
	1.0	16.6	7.9	81 %
	2.0	15.5	7.7	78 %
	3.0	14.7	5.4	53 %
	4.0	12.2	0.0	0 %
	5.0	8.0	0.0	0 %
	6.0	6.5	0.0	0 %

SECCHI DISK (m): 3.2
BOTTOM DEPTH (m): 6.2
TIME: 1115

COMMENTS:

*Dissolved oxygen values are in mg/L

Nathan Pond
Dixville



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AQUATIC PLANT SURVEY

LAKE: NATHAN POND TOWN: DIXVILLE DATE: 08/04/92

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
A	Sagittaria	Arrowhead	Scattered
J	Juncus	Rush	Sparse
W	Potamogeton	Pondweed	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
Y	Nuphar	Yellow water lily	Sparse
N	Nymphaea	White water lily	Sparse
S	Sparganium	Bur reed	Scattered

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. A beaver hut and wood duck box were observed.